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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,290	02/28/2002	Paul Morton	13346US01	3107
23446	7590	03/01/2005	EXAMINER	
MCANDREWS HELD & MALLOY, LTD			STORM, DONALD L	
500 WEST MADISON STREET			ART UNIT	PAPER NUMBER
SUITE 3400				
CHICAGO, IL 60661			2654	

DATE MAILED: 03/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/087,290	MORTON ET AL.	
	Examiner	Art Unit	
	Donald L. Storm	2654	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on February 28, 2002 through February 12, 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-32 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 28 February 2002 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2/12/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. A copy of the search report for application EP 03004539.7-1246- of the European Patent Office (submitted February 12, 2004) and copies of the documents are present, and they have been considered by the Examiner.

Specification

2. The Examiner notes, without objection, the possibility of informalities in the abstract. It is in the best interests of the patent community that the Applicant be aware of these editorial situations and consider changes during normal review and revision of the abstract.

Numbers in the abstract referring to elements in the drawings lengthen the abstract and the reference is unclear when not accompanied by the appropriate figure. They may interfere with its purpose, which is to determine quickly from a cursory inspection the nature and gist of the technical disclosure. The language should be clear and concise. See 37 CFR § 1.72 and MPEP § 608.01(b). The form used in the patent disclosure, such as “decoder (10)”, “memory (44)”, and “processor (42)” may not be appropriate in the abstract.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this

subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Müller

4. Claims 1, 2, 6, 8-10, 14, 16-18, 22, 24-26, 30, and 32 are rejected under 35 U.S.C. 102(e) as being anticipated by Miiller [US Patent 6,633,608] (spelling corrected).

Regarding claim 1, Müller [at column 2, lines 16-21] describes a decoder to decoding compressed data by describing the content and functionality of the recited limitations recognizable as a whole to one versed in the art as the following terminology:

a memory [see Fig. 1, items 100, 117, 305, and their descriptions, especially at column 8, lines 47-50, of the single memory module supplying the anchor frame memory module and the decompression module memory];

the memory arranged to store the compressed data [see Fig. 1, items 100, 117, 305 and their descriptions, especially at column 4, lines 64-65, of the anchor frame memory storing the compressed stream];

the memory arranged to store operating code (or operating data, or both) [see Fig. 1, items 100, 117, 300, 305, and their descriptions, especially at column 15, lines 4-6, of a microprocessor configured by code segments to create specific logic circuits];

a processor [see Fig. 1, items 100, 150, 300, 400, ROUTINE(s) and their descriptions, especially at column 15, lines 4-6, of a microprocessor configured by code segments to create specific logic circuits];

the processor arranged to allocate an amount of the memory for storing compressed data and for storing operating data, operating code, or both [see Fig. 1, items 100, 117, 150, 300, 305, and their descriptions, especially at column 5, lines 64-67, of the controller operating to adapt a

memory resources allocation between the anchor frame memory and decompression module memory];

the processor arranged to decode the compressed data stored in the allocated amount of memory [see Fig. 1, items 100, 200, 117, 300, and their descriptions, especially at column 5, lines 1-11, of the decompression module mirroring operation of the compression module on compressed block data retrieved from anchor frame memory module];

the compressed data corresponds to a predetermined duration of uncompressed data [at column 4, lines 11-22, as each reconstructed pixel block within an anchor frame of a stream is compressed];

the operating data or code is for a plurality of decompression algorithms, the different algorithms require different amounts of memory to store compress data, and the allocating depends on the decompression algorithm [at column 6, lines 8-26, as the allocation decision is made according to a defined scaling factor to compress and decompress within the context of compression/decompression used and alternatively PIP navigation window being displayed over video information];

the different algorithms require different amounts of memory for the operating data and code [at column 6, lines 11-24 and column 8, lines 14-15, as in the case of no compression decompression, the decompression module memory will receive little or no allocation and alternatively in the case of PIP navigation window being displayed of video information, the decompression module will operate to decompress the information retrieved by receiving an allocation of memory resources sufficient to enable the decompression module to function];

the decompression algorithm is selected [at column 7, line 61-column 8, line 3, as the selection of DCT mode of non-DCT mode may be made];

the processor arranged to select one of the decompression algorithms [at column 10, lines 15-18, as is enabling the decompression module allows for continuation of the decode function while enabling the PIP function].

5. Regarding claim 2, Miiller also describes:

a first portion to store operating data, operating code, or both [see Fig. 1, items 100, 117, 300, 305, and their descriptions, especially at column 15, lines 4-6, of a microprocessor configured by code segments to create specific logic circuits];

the stored operating data or code is for a decompression algorithm [at column 8, lines 14-15, as the decompression module will operate to decompress the information retrieved by receiving an allocation of memory resources sufficient to enable the decompression module to function];

a second portion to store an amount of compressed data suitable for the algorithm [at column 6, lines 8-26, as the allocation decision is made according to a defined scaling factor to compress and decompress within the context of compression/decompression used];

the algorithm is selected [at column 7, line 61-column 8, line 3, as the selection of DCT mode of non-DCT mode may be made].

6. Regarding claim 6, Miiller also describes

compressed data comprising identification data [at column 7, lines 40-43, as the compressed stream is packed with scaling factors];

the compressed, identification data identifies the compression algorithm and the selection is in response to the identification data [at column 6, lines 8-26, as the allocation decision is made

according to a defined scaling factor to compress and decompress within the context of compression/decompression used and alternatively PIP navigation window being displayed over video information].

7. Regarding claim 8, Miiller also describes:

the memory arranged to store [see Fig. 1, items 100, 117, 305, and their descriptions, especially at column 8, lines 47-50, of the single memory module supplying the decompression module memory];

the memory is arranged to store operating data [see Fig. 1, items 100, 117, 300, 305, 310-340 and their descriptions, especially at column 8, lines 4-19, of the memory allocation of unpacking module, Q-1 module, HAAR-1 module, and IDCT module];

the memory is arranged to store operating code [see Fig. 1, items 100, 117, 300, 305, and their descriptions, especially at column 15, lines 1-6, of a microprocessor configured by code segments to create specific logic circuits when loaded into the computer].

8. Claims 9, 10, 14, and 16 set forth a method with limitations comprising the functionality associated with using the system recited in claims 1, 2, 6, and 8, respectively. Because Miiller describes the similar limitations as indicated there, these claims thus are anticipated accordingly.

9. Claim 17 sets forth limitations similar to the store, select, and allocate limitations set forth in claim 1. Miiller describes the limitations as indicated there. In addition, the memory and processor set forth in claim 1 describe means for providing the functionality for storing, selecting, and allocating.

10. Claim 18 sets forth additional limitations similar to limitations set forth in claim 2. Miiller describes the additional limitations as indicated there. In addition, the memory and processor set forth in claim 1 describe means for selecting and allocating to provide means for allocating first and second amounts of memory.

11. Claim 22 and 24 set forth additional limitations similar to limitations set forth in claim 6 and claim 8, respectively. Miiller describes the additional limitations as indicated there. In addition, the memory and processor set forth in claim 1 describe means for providing the claimed functionality.

12. Claims 25, 26, 30, and 32 set forth the tasks having limitations comprising the functionality to achieve use of the system recited in claims 1, 2, 6, and 8, respectively. Miiller describes those limitations as indicated there, and Miiller also describes:

a computer readable medium with executable instructions representing a computer program that can cause a computer to perform the tasks [at column 14, lines 54-62, as computer readable storage media embodying computer program code wherein a computer loading and executing the code becomes an apparatus for practicing the processes].

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Miiller and Nichols

14. Claims 3-5, 11-13, 19-21, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miiller [US Patent 6,633,608] (spelling corrected) in view of Nichols et al. [US Patent 6,343,263].

15. Regarding claim 3, Miiller describes the included claim elements as indicated elsewhere in this Office action. Miiller [at column 12, lines 20-30] also describes the compressed data comprises audio data.

However, Miiller does not explicitly describe that the compressed data is voice data.

Like Miiller, Nichols [at column 3, lines 38-45] system can employ multimedia devices, including audio. Miiller chooses video processing as a specific example, but Nichols chooses fax and audio as a specific example. Among the processing that Nichols explicitly describes is:

voice data [at column 2, lines 66-67, as data such as voice].

As indicated, Nichols shows that processing voice data as a type of audio data was known to artisans at the time of invention. To the extent that Miiller's [at column 12, lines 20-31] MPEG-2 audio processing does not necessarily include processing voice data, it would have been obvious to one of ordinary skill in the art of handling streams of data at the time of invention to

include the concepts described by Nichols at least processing voice data as Miiller's compressed audio data because Nichols [at column 2, lines 34-67] also points out that it is desirable to provide for handling streams of speech data transmitted at the same time as video data to enable a variety of applications, including speech compression.

16. Regarding claim 4, Miiller also describes:

data decompression algorithms [at column 5, lines 1-11, of the decompression module mirroring operation of the compression module].

Nichols also describes:

voice data algorithms [at column 2, lines 60-67, as commands to the processing engine to enable use with voice].

Although neither Miiller nor Nichols explicitly describes voice decompression algorithms, Nichols [at abstract] describes a flexibility for a variety of applications to process any type of data that is transmitted over a communication network by abstracting the functions of each element of the processing system from each other. To the extent that Miiller's [at column 12, lines 20-31] MPEG-2 audio processing does not necessarily include processing voice data, it would have been obvious to one of ordinary skill in the art of handling streams of data at the time of invention to include the concepts described by Nichols at least processing voice data as Miiller's compressed audio data because Nichols [at column 2, lines 34-67] also points out that it is desirable to provide for handling streams of speech data transmitted at the same time as video data to enable a variety of applications, including speech compression.

17. Regarding claim 5, Nichols also describes:

the data results from a phone call [at column 4, lines 6-54, as providing a stream of data from answering a received call on a traditional POTS communications network];
processing occurring during the phone call [at column 5, lines 35-37, as real-time functions and operation of the real-time engine].

Although neither Miiller nor Nichols explicitly describes compressed data resulting from a phone call and selection and allocation occur during the phone call, Nichols [at abstract] describes a flexibility for a variety of applications to process any type of data that is transmitted over a communication network by abstracting the functions of each element of the processing system from each other. As indicated, Nichols shows that processing data resulting from a phone call during the phone call was known to artisans at the time of invention. The many teachings throughout Nichols of the flexibility to implement varieties of real-time processing would have made it obvious to one of ordinary skill in the art of voice data processing at the time of invention to include the concepts described by Nichols to receive Miiller's compressed data from a phone call and selecting the algorithms and allocating memory during the phone call because Nichols [at column 2, lines 34-67] also points out that it is desirable to provide for handling streams of speech data transmitted at the same time as video data to enable a variety of applications in real time, including speech compression.

18. Claims 11-13 set forth a method with limitations comprising the functionality associated with using the system recited in claims 3-5. Because Miiller and Nichols describe and make obvious the similar limitations as indicated there, these claims thus are unpatentable accordingly. Because Nichols's processing is real-time, decoding occurs during the phone call.

19. Claims 19 and 20 set forth additional limitations similar to limitations set forth in claims 3 and 4, respectively. Miiller and Nichols describe the additional limitations as indicated there.

20. Regarding claim 21, Miiller describes the included claim elements as indicated elsewhere in this Office action. Miiller also describes:

decoding (the compressed data) [see Fig. 1, items 100, 200, 117, 300, and their descriptions, especially at column 5, lines 1-11, of the decompression module mirroring operation of the compression module on compressed block data retrieved from anchor frame memory module].

Miiller [at column 12, lines 20-30] also describes the compressed data comprises audio data. However, Miiller does not explicitly describe that the decoding, selecting, and allocating operate during a phone call.

Like Miiller, Nichols [at column 3, lines 38-45] system can employ multimedia devices, including audio. Miiller chooses video processing as a specific example, but Nichols chooses fax and audio received over a telephone network as a specific example. Among the processing that Nichols explicitly describes is:

processing occurring during a phone call [at column 5, lines 35-37, as real-time functions and operation of the real-time engine].

As indicated, Nichols shows that processing voice data during a phone call as a type of audio data was known to artisans at the time of invention. Since Nichols [at column 2, lines 34-67] also points out that it is desirable to provide for handling streams of speech data transmitted at the same time as video data to enable a variety of applications, including speech

compression, it would have been obvious to one of ordinary skill in the art of processing data received during a phone call at the time of invention to include the concepts described by Nichols at least processing during the phone call to allow Miiller's audio and video data to be received over a telephone network to decode it and store it in memory that was allocated during the phone call because that would enable a variety of real time telephone applications.

21. Claims 27-29 set forth additional limitations similar to limitations set forth in claims 3-5, respectively. Miiller and Nichols describe and make obvious the additional limitations as indicated there. Because Nichols's processing is real-time, decoding occurs during the phone call.

Müller and Shaffer

22. Claims 7, 15, 23, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miiller [US Patent 6,633,608] (spelling corrected) in view of Shaffer [US Patent 6,683,889].

23. Regarding claim 7, Miiller describes the included claim elements as indicated elsewhere in this Office action, including the stored, compressed data in the allocated memory as indicated in the rejection of parent claim 1.

Miiller extensively discusses memory allocation related to the storage requirements of the compression/decompression modes, but does not discuss the modes' processing times, packetization and packet transfer times, and the time delay that they cause between reception of the data and display of the data to the user.

In particular, Miiller does not explicitly describe removing jitter from the compressed data stored in the allocated memory.

Shaffer describes that removing jitter from the compressed data stored in the allocated memory was known to artisans at the time of invention, as follows:

remove jitter from compressed data stored in allocated memory [at column 1, lines 18-51, as even out “jitter” of packets of compressed data for the payload of a FIFO jitter buffer of predetermined depth].

Since Shaffer [at column 1, lines 26-28] also points out that jitter can cause poor overall reproduction quality of multimedia data, it would have been obvious to one of ordinary skill in the art of data compression, packetization, transfer, decompression, and reproduction of data at the time of invention to include the concepts described by Shaffer at least removing jitter from the compressed data stored in the allocated memory with Miiller’s processing and reproduction of packetized data because jitter removal has the advantage of removing clicks, delays, other annoyances that create overall poor reduction quality.

24. Claim 15 sets forth a method with limitations comprising the functionality associated with using the system recited in claim 7. Because Miiller and Shaffer describe and make obvious the similar limitations as indicated there, these claims thus are unpatentable accordingly.

25. Claim 23 sets forth additional limitations similar to limitations set forth in claim 7. Miiller and Shaffer describe the additional limitations as indicated there. In addition, the memory and processor set forth in claim 1 describe means for provide the claimed functionality.

26. Claim 31 sets forth the additional task having limitations comprising the functionality to achieve use of the system recited in claim 7. Miiller and Shaffer describe and make obvious those additional limitations as indicated there, and Miiller also describes: instructions that can cause a computer to perform the task [at column 14, lines 54-62, as computer program code embodied on computer readable storage media wherein a computer loading and executing the code becomes an apparatus for practicing the processes].

Conclusion

27. The following references here made of record are considered pertinent to applicant's disclosure:
- Chu [US Patent 5,374,916] describes memory allocation to compress data and store a history of operation of the compression.
- Clark [US Patent 5,627,533] describes altering the size of memory allocated to storing a table used for encoding and decoding speech data.
- Troeller et al. [US Patent 5,768,445] describes allocating memory, storing uncompressed data, and storing compressed data during encoding of an uncompressed information stream.
- Makiyama et al. [US Patent 6,310,981] describes transmitting and receiving a variety executable functions for decoding, wherein the received functions are selectable according to the resources that they require.
28. Any response to this action should be mailed to:

Mail Stop Amendment

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P.O. Box 1450
Alexandria, VA 22313-1450

or faxed to:

(703) 872-9306, (for formal communications intended for entry)

Or:

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Patent Correspondence delivered by hand or delivery services, other than the USPS, should be addressed as follows and brought to U.S. Patent and Trademark Office, Customer Service Window, **Mail Stop Amendment**, Randolph Building, 401 Dulany Street, Alexandria, VA 22314

29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Storm, of Art Unit 2654, whose telephone number is (703) 305-3941. The examiner can normally be reached on weekdays between 8:00 AM and 4:30 PM Eastern Time. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (703) 305-9645.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: ebc@uspto.gov. For general information about the PAIR system, see <http://pair-direct.uspto.gov>.

February 22, 2005

Donald L. Storm
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